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UNITING AVIATION

NO COUNTRY LEFT BEHIND



Update on ICAO Developments

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39th

TRIENNIAL ASSEMBLY

ICAO HQ, MONTREAL, 27 SEP-07 OCT 2016



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Endorsed: Global Aviation Safety Plan (GASP)

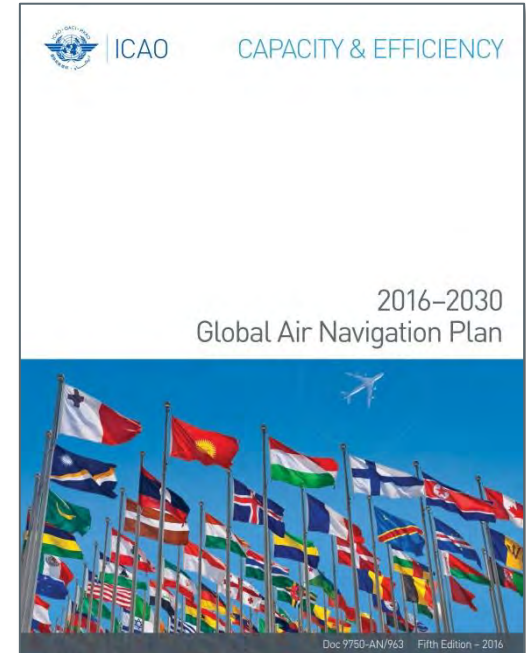
- **2017-2019 Edition**
 - **Maintains** the framework, objectives and safety performance enablers of the 2014-2016 edition
 - New **global aviation safety roadmap** ensures that safety initiatives deliver the intended benefits associated with the GASP objectives through enhanced coordination
 - Reducing inconsistencies and duplication of efforts
- **Cooperative, collaborative, and coordinated approach**
 - Together with all stakeholders and under the leadership of ICAO, the GASP offers a long-term vision in developing a harmonized safety strategy.





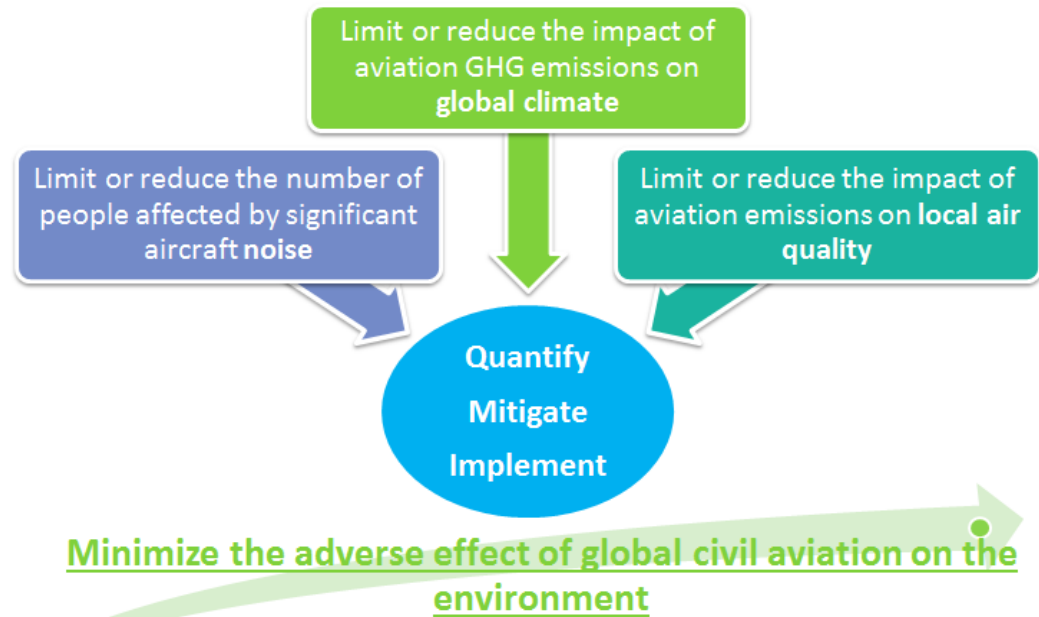
Endorsed: Global Air Navigation Plan (GANP)

- **5th Edition of the GANP (2016-2031)**
 - Includes the 2016 edition of the Aviation System Block Upgrades (ASBU) document
 - Stability
- **Included improvements:**
 - Six-year cycle for the Blocks to align with Assembly cycles
 - Update of the ASBU framework and all technical roadmaps
 - Concept of performance-based approach as foundation for implementation strategies
 - Notion of minimum path
 - ATM logical architecture
 - Creation of GANP webpage





ICAO Environmental Goals



SUSTAINABLE DEVELOPMENT GOALS ICAO's environmental work contributes to 10 out of the 17 United Nations SDGs



Also guided by ENV related UN SDGs



Acknowledged: progress in all elements of the basket of measures (i.e. aircraft technology and Standards, operational improvements, sustainable alternative fuels, and global MBM)

Agreed: Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)



CORSIA

Adopted: 3 Assembly Resolutions :

- **Resolution A39-1: Consolidated Statement of continuing ICAO policies and practices related to environmental protection – General provisions, noise and local air quality**
- **Resolution A39-2: Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change**
- **Resolution A39-3: Consolidated statement of continuing ICAO policies and practices related to environmental protection – Global Market-based Measure (MBM) scheme *NEW!***



Underlined: the equal footing of Aviation Security and Facilitation

Stressed the following key points:

- The UN council resolution 2309 as an overall global frame which urges all States to work with and through ICAO
- **The development of a Global AVSEC Plan (GASeP)** – a first draft will be presented to the AVSEC Panel/28, 29 May – 2 June 2017
- Strategic priorities such as: strengthened implementation of Annex17/Annex9 (security provisions), capacity building (no country left behind), international cooperation , landside security , insider threat, cybersecurity
- **Resolution on addressing cybersecurity in civil aviation**



GLOBAL OUTLOOK





Challenges for the Industry

- **Safety and Protectionism**

- Restrictions on the carry-on of large electronic items
- Potential impact of air travel ban

“We remain concerned over the impact of any travel restrictions or closing of borders.”

- Alexandre de Juniac, IATA’s Director General (April 2017)

- **Economic Opportunities**

- Profits for 2016Q4 is \$4.7 billion, compared to 2015Q4 of \$2.7 billion
- Operating profit margin at 10%, still high



Oil Prices Rise But Remain Low

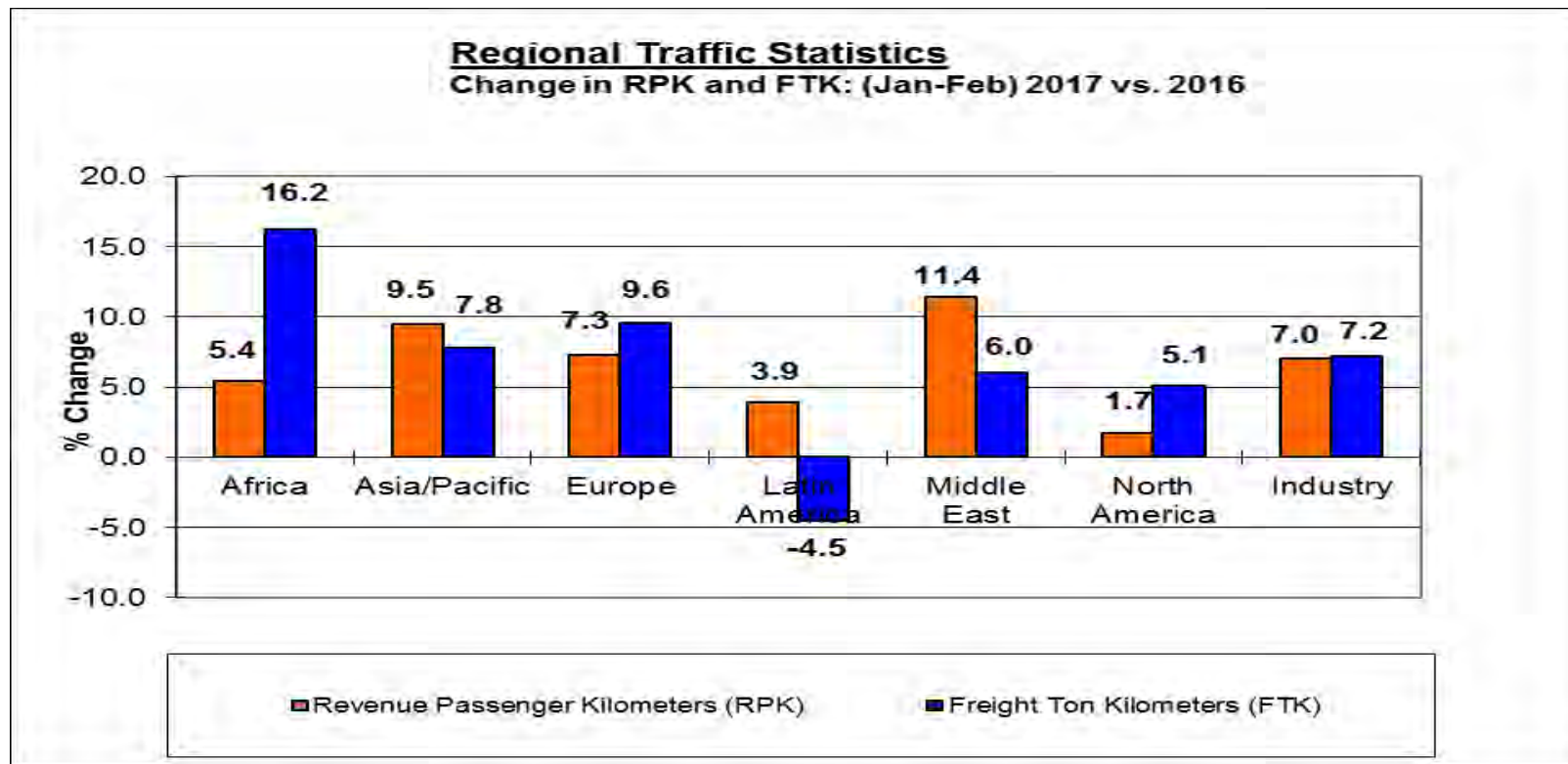
- **Oil prices** reached 13-year lows around \$30 in early 2016 before **recovering to just above \$50 recently** (April 2017) for both the WTI Cushing and European Brent.
- **US Energy Information Administration (EIA) forecast remain low** - WTI at \$52 in 2017, \$55 in 2018.
- Driving factors: Supply/demand factors, geopolitical events, exchange rate movements.
- **OPEC Cut:** Likely extended in May 2017 meeting.
- ➔ **Expectation:** Low oil (<\$60/bbl) in the 2-3 years.

“It can be argued confidently that the market is already very close to balance.”

- The International Energy Agency, April 13, 2017

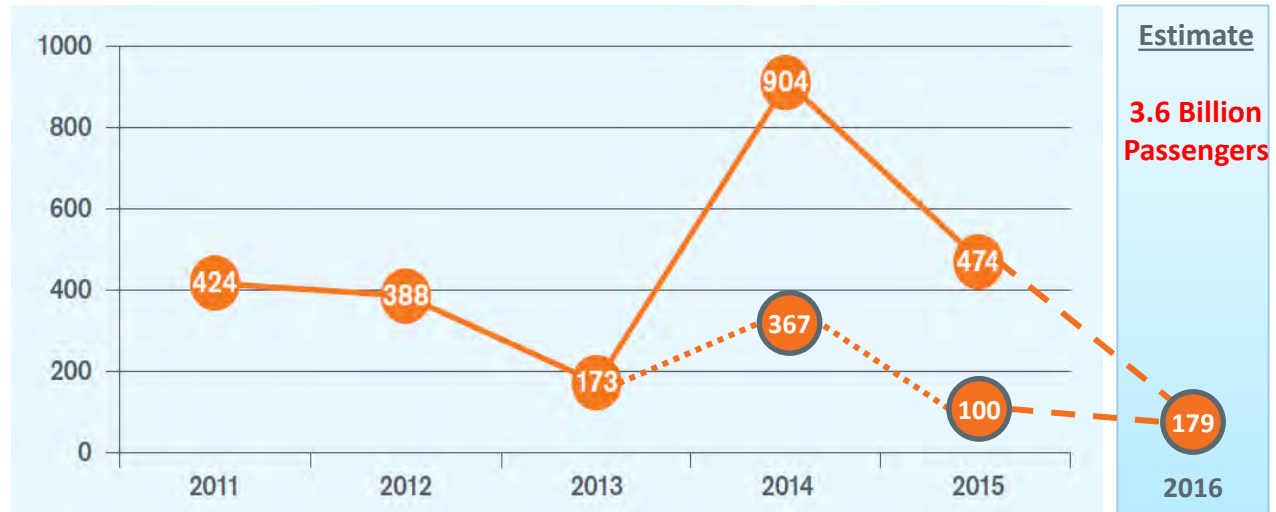
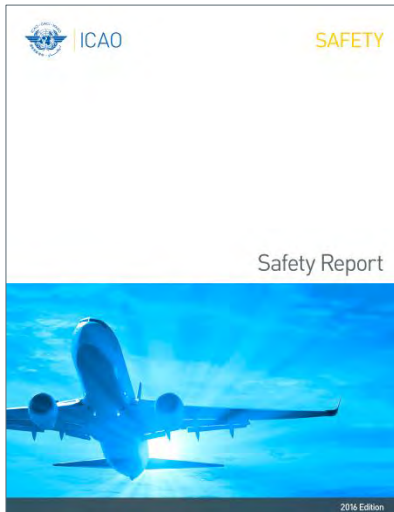


2017 Global Regional Trends (Year-to-Date Feb)





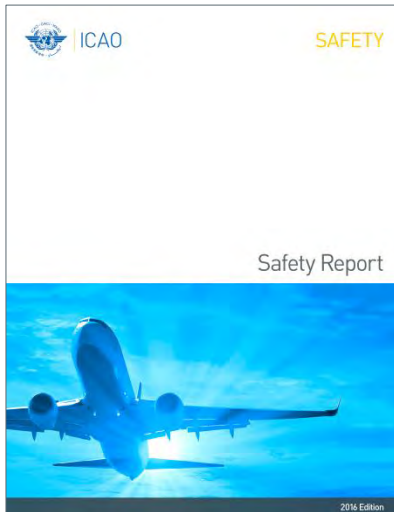
Fatalities Trend for Scheduled Commercial Flights (2011 – 2016)



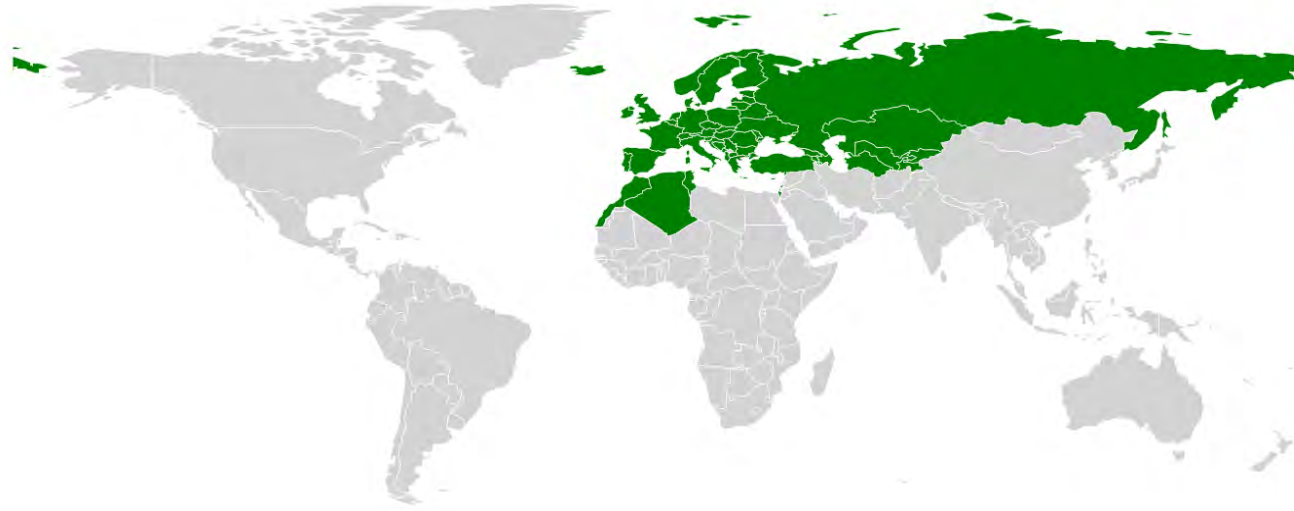
Fatalities showed a spike during 2014, and then recovered in 2015



Fatalities Trend for Scheduled Commercial Flights (2011 – 2016)



Overall, accidents and fatal accidents have been decreasing



REGIONAL STATUS (EUR/NAT)



Source: **iSTARS 3.0** – MAP Builder (<https://portal.icao.int/space>)

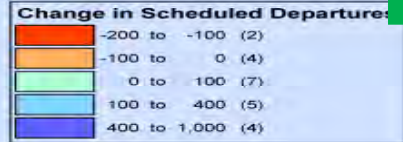


Regional Status (EUR/NAT)

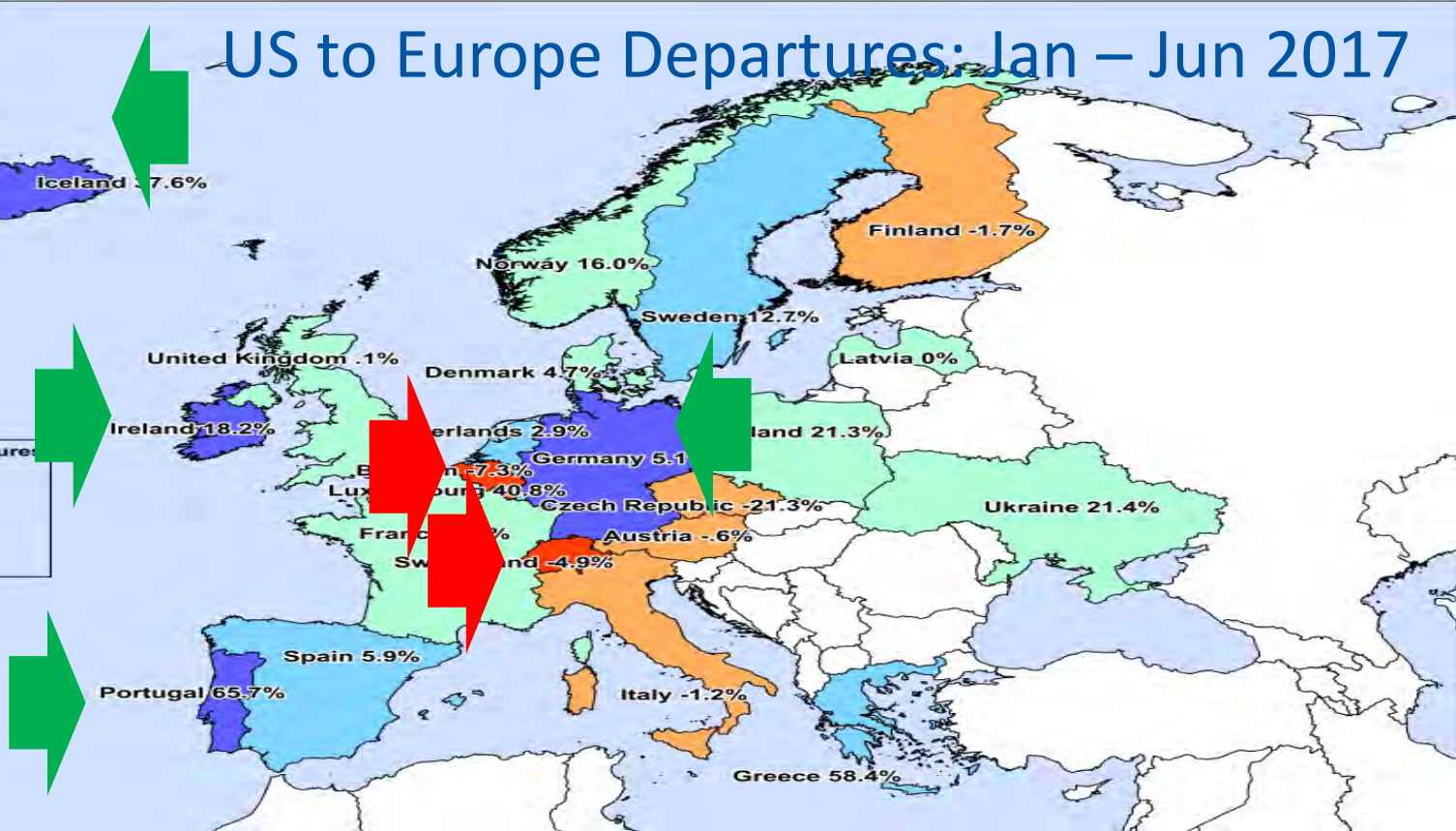
TRAFFIC GROWTH



US to Europe Departures: Jan – Jun 2017



Source: Innovata



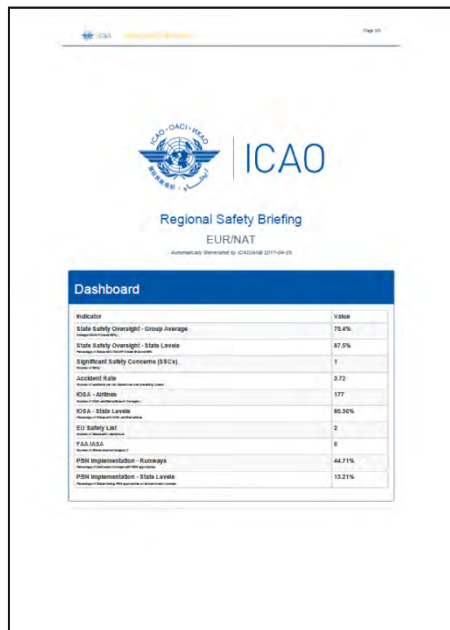


Regional Status (EUR/NAT)

SAFETY RELATED CHALLENGES



Regional Safety Briefing

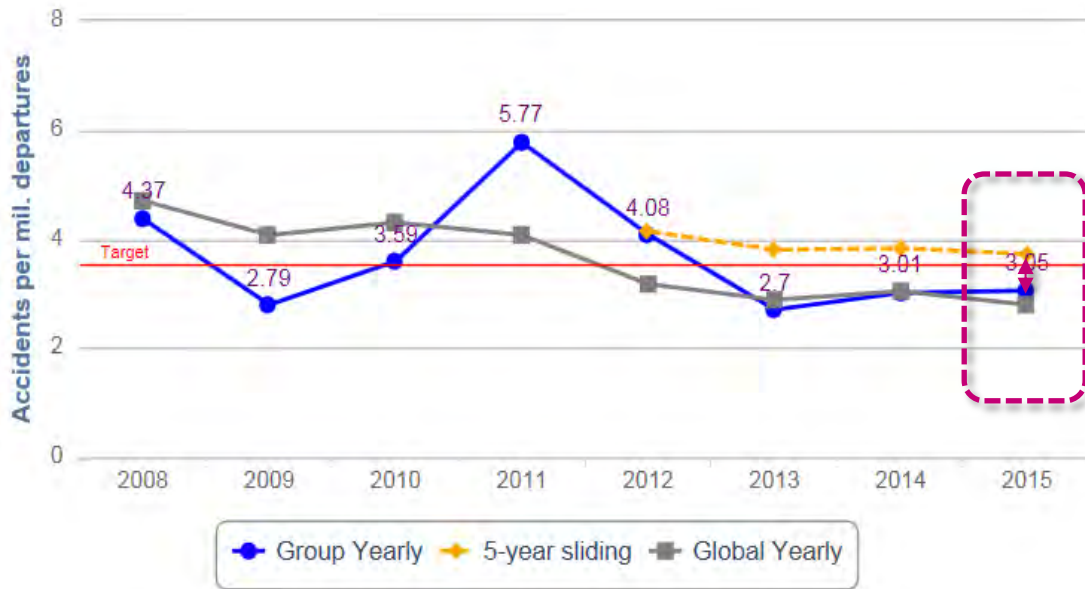


Dashboard	
Indicator	Value
State Safety Oversight - Group Average <i>Average USOAP Overall EI (%)</i>	75.4%
State Safety Oversight - State Levels <i>Percentage of States with USOAP Overall EI above 60%</i>	87.5%
Significant Safety Concerns (SSCs) <i>Number of SSCs</i>	1
Accident Rate <i>Number of accidents per mil. departures over preceding 5 years</i>	3.72
IOSA - Airlines <i>Number of IOSA certified airlines in the region</i>	177
IOSA - State Levels <i>Percentage of States with IOSA certified airlines</i>	80.36%
EU Safety List <i>Number of States with restrictions</i>	2
FAA IASA <i>Number of States rated as Category 2</i>	0
PBN Implementation - Runways <i>Percentage of instrument runways with PBN approaches</i>	44.71%
PBN Implementation - State Levels <i>Percentage of States having PBN approaches on all instrument runways</i>	13.21%



Global and Europe Accident Rates

Scheduled commercial above 5 700kg for 2008 - 2015



Average accident rate for Europe is **higher** than the global average

Source: *iSTARS 3.0 – Regional Safety Briefing* (<https://portal.icao.int/space>)



Regional Status (EUR/NAT)

ENVIRONMENTAL PROTECTION



States' Action Plan Initiative



103 States representing **90.11%** of global RTK have submitted an action plan to ICAO.

43 Actions Plans from the **EUR NAT Region**

25 States **EUR NAT Region** updated and submitted their Action Plans to ICAO in 2015/2017

3 States from the **EUR NAT Region** submit their first Action Plan in 2015/2016

3 ICAO *Buddy Partnerships*

2 joint assistance projects



Regional Status (EUR/NAT)

AVIATION SECURITY/FACILITATION



The EUR/NAT Regions Challenges in AVSEC

- We face the special situation to have **three organizations (ICAO, ECAC, EU)** which care about Aviation Security in Europe; this is a **challenge**.
- Good **coordination and cooperation is necessary**; and moreover a clear picture about **each organizations mandate and assignment**
- Fact is : **all States are Member States of ICAO (56 in Europe, just 44 are also members of ECAC and only 28 (plus 3, Switzerland, Norway, Iceland) are additionally EU Member States)**
- **ICAO develops standards and recommended practices which form the global and regional basis for safeguarding international civil aviation against acts of unlawful interference (Annex 17);** the EU develops more detailed legislation, which should be based on and never in contradiction to Annex 17, ECAC follows the EU (recommendations, no legal enforcement power)



TOPICS OF INTEREST





Forum on Regional Safety Oversight Organisations for Global Aviation Safety (RSOO Forum)

- Co-organised by ICAO and EASA, from 22 to 24 March 2017 in Ezulwini, Swaziland
- Global Strategy and Action Plan for the Improvement of Regional Safety Oversight Organizations (RSOOs) and the Establishment of a Global System for the Provision of Safety Oversight
 - Improvement and strengthening of RSOOs
 - Develop and implement an RSOO cooperative platform
 - Develop and implement a global aviation safety oversight system (GASOS)
- Ministerial Declaration on Regional Safety Oversight Organizations in Africa
 - Development of a Strategic Plan for Supporting and Strengthening RSOOs in the AFI Region
 - Action Plan to implement the Declaration by ICAO through the AFI Plan and in collaboration with AFCAC and partners



CORSIA

- ICAO Seminar on CORSIA 10 to 11 May 2017 , Montreal, Canada
- As of 21 April 2017, 67 States (including 45 from the EUR NAT Region), representing more than 87.5% of international aviation activity, intend to voluntarily participate in the global





Some thoughts about the Future

- **Continued evolution** of our standardization methodology
- **SARPs-ready proposals** from Standards-making organizations and other aviation stakeholders





Standards Roundtable

- **Interface** between standards-making organizations and ICAO
- Standardization **roadmap**
- Increase **referencing** of industry standards
- Support **performance-based** standards

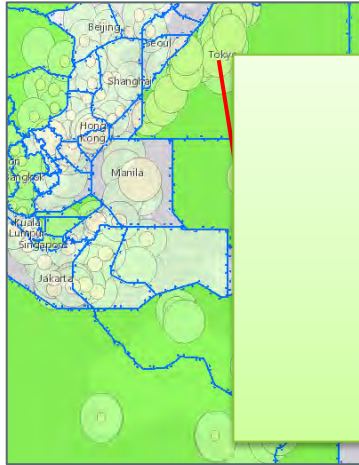




Current and Emerging Issues



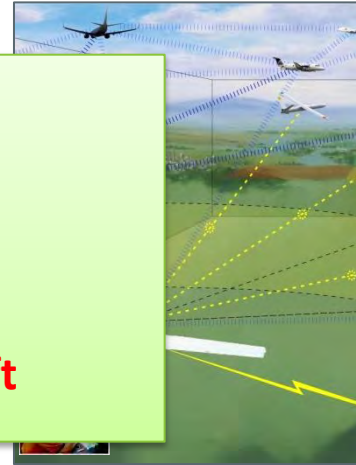
Conflict Zones



Global Tracking



Cyber



RPAS



Space Transportation

What next?
Mental Health
GPS interruption
Cargo Safety
Supersonic aircraft



Challenge: Small UAS

- **Small unmanned aircraft (< 25 kg) pose a serious difficulty for States' civil aviation authorities**
- **A39 Recommendation: Regulate small UAS on a domestic scale**
 - **Challenge:** Generally outside of ICAO's remit, and does not fit well in the system of SARPs and PANS (i.e. International context)
 - **Need:** New working methods involving non-traditional provisions, at the speed of industry development, to harmonize domestic regulations globally
 - If not possible, then ensure interoperability





Cyber

- Joint effort between Security and Safety teams
 - ICAO Assembly Resolution A39-19
 - Alignment of Panel cybersecurity work
- Focus on enabling connectivity and interoperability in the aviation system





THE INAUGURAL 2017
ICAO CYBER SUMMIT AND EXHIBITION
MAKING SENSE OF CYBER

A JOINT ICAO AVIATION SAFETY AND SECURITY EVENT
DUBAI, UNITED ARAB EMIRATES, 4-6 APRIL 2017



- A Joint ICAO Aviation Safety and Security Event (Dubai, 4-6 April 2017)
- The way forward:
 - Establish a Cyber Regulatory Framework (Safety and Security)
 - Identify current and future threats, and implementing risk mitigation
 - Enable a global SWIM
 - Identify Cross-domains impacts
 - Promote Cyber culture
- Will be reported to GANIS this December



UPCOMING EVENTS





ICAO/UNOOSA Aerospace Symposium

29 – 31 Aug, Vienna, Austria

- **Co-organized with United Nations Office for Outer Space Affairs (UNOOSA)**
- **Follow up on the two previous aerospace symposia (2015 - Montréal, 2016 - Abu Dhabi)**
- **Update on the current work with the Space Learning Group**
 - Impact on activities in aerodromes and airspace
 - Taking account of scenarios are either actual or imminent (within a year)
 - Development of a roadmap or similar guidance material by AN-Conf/13 for States that might be affected by such operations.
- **Updates on Space Debris**
 - Currently EUROCONTROL and ESA are working together to assess the risk.
 - The risk growth factor, however, is significant in that both factors regarding the probability of the risk (i.e. number of hazards and number of targets) is growing.



Safety Management Regional Symposia

4 Regional Symposia, starting from Q3 2017

- A forum for participants to **exchange ideas** and **implementation experiences** and contribute to the future of safety management.
- The symposia will provide an important information-sharing opportunity for **regulators, service providers, operational personnel and all aviation professionals involved in safety-management activities**.
- To include a **workshop** with **hands-on exercises**
- **Dates:**
 - **APAC and MID Regions:** Hosted by **Singapore / 12-15 September 2017**
 - **EUR/NAT Region:** Hosted by the EC and Estonian Presidency of the EU, **Tallinn / 16-18 October 2017**
 - **NACC and SAM Regions: 2018** (exact dates and location to be confirmed)
 - **ESAF and WACAF Regions: 2018** (exact dates and location to be confirmed)



ICAO Global Aviation Security Symposium (AVSEC2017) *ICAO HQ, 12-14 September 2017*

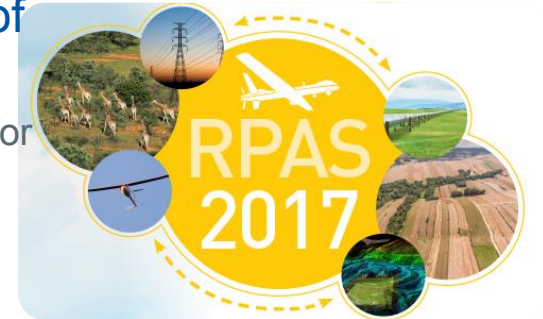
- In collaboration with Airports Council International (ACI)
- will serve as a platform to promote the work of ICAO, its Member States and stakeholders in the area of aviation security
- will bring together AVSEC professionals to advance the cultivation of a new mind-set towards aviation security, one that embraces AVSEC as a culture beyond a set of standards.
- will enhance international cooperation and collaboration to address the threat posed by terrorists targeting civil aviation by reinforcing, strengthening and promoting the international framework of aviation security standards.
- an interactive exhibition showcasing the latest State and industry AVSEC technology and process innovations, along with dynamic learning workshops that will stimulate panel discussions on current challenges facing aviation security.
- More information is available at www.icao.int/Meetings/AVSEC/Pages/default.aspx



2nd RPAS Symposium

19-21 Sep, ICAO HQ

- A forum for participants to **exchange ideas** and **implementation experiences** related to remote pilot training and licensing
- Also highlighting **RPAS operator responsibilities for conducting safe operations** and an understanding of **RPAS in the ATM environment**
 - Annex 1 SARPs and PANS-Training provisions are anticipated for adoption in March 2018; this symposium will provide the first opportunity for **regulators, training facilities, and all aviation professionals to share information on this rapidly evolving new aviation sector**





1st UAS Industry Symposium

22-23 Sep, ICAO HQ

- Response to A39 request for expansion of ICAO's scope to **harmonize domestic regulations for UAS operations**
- Invitation for States, industry and academia to present best solutions to identified problem statement - **Unmanned Aircraft System Traffic Management System (UTM)**





Inter-regional Seminar on “Service Improvement Through Integration Of AIM, MET and ATM Information Services”

2-5 October, Eurocontrol, Brussels, Belgium

- To review the implementation status of the ASBU Block 0 Modules of the PIA 2 (B0-D ATM, B0-AMET and B0-FICE) and associated challenges/lessons learned;
- To stress on the pre-requisites for an efficient and timely planning for the implementation of the Block 1 Modules related to SWIM (B1-DATM, B1-AMET, B1-SWIM and B1-FICE);
- To address the SWIM concept (infrastructure and AIRM, governance, information services etc);
- Open to all States from APAC, EUR, MID and NAT Regions, FAA, international organisations and aviation industry.



Global Aviation Cooperation Symposium II (GACS II) *11 -13 October, Athens ,Greece.*

- Second Global Aviation Cooperation Symposium (GACS II)
- Organized by ICAO's Technical Cooperation Bureau in collaboration with the Hellenic Civil Aviation Organization (HCAA) and the Athens International Airport (AIA),
- Theme of this year's symposium: **“Managing Change: building a safe, secure and sustainable aviation community”**.
- Includes an industry exhibition to foster a unique forum for regulators, service providers, operators and other industry stakeholders to discuss and share their experiences and best practices in implementing technical cooperation and assistance projects, with the aim of fostering a solid aviation community.
- More information is available in the event website: <http://www.icao.int/meetings/GACS2017>



ICAO Global NGAP Summit

(23 – 25 Oct, Qatar)

- Supported by **ILO** and **UNESCO**, and hosted by the **Qatar Civil Aviation Authority**
- Provides a unique opportunity to promote **coordination and cooperation** amongst the aviation community, education and labour sectors for the development of strategies and tools to engage and retain the next generation of aviation professionals.
- Event is in English/Arabic, with over 500 participants expected (including high-level officials)
- Side events include Model ICAO Council and Exhibition
- **Event Objectives:**
 - Continue to **raise awareness** regarding the impending shortage of aviation professionals and encourage CAAs to communicate and cooperate with government education and labour bodies to promote aviation as a profession.
 - Promote **cooperation and coordination** for the development of common NGAP guidelines or standards for use by all aviation stakeholders (i.e. civil aviation authorities, industry, international organizations and academia).
 - Promote the **exchange of knowledge, ideas, best practices and experiences** regarding NGAP related activities amongst States, industry, international organizations and academia.
 - Promote **collaboration between States and the aviation community** to identify long-term human resource needs and establish strategies to attract, educate and retain aviation professionals, considering gender equality.

2nd Global Runway Safety Symposium

(20-22 Nov, Lima, Peru)

- Co-organised with the Runway Safety Programme Partners
- Hosted by the Direccion General de Aeronautica Civil de Peru
- Event in English/Spanish, with 300 participants expected
- **Objectives:**
 - provide a global forum to **exchange information on best practices** in improving runway safety through the use of effective and innovative strategies, tools, technology and practices
 - promote improved runway safety worldwide through **global collaboration** and sharing strategies and best practices;
 - promote the ICAO-led collaborative new **Runway Safety Programme Action Plan** for supporting and strengthening runway safety initiatives;
 - promote the **participation of stakeholders in regional initiatives** related to runway safety; and
 - increase the number and improve the effectiveness of **airport Runway Safety Teams (RSTs)** under a risk-based approach in relation to airport safety management systems (SMS).



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RUNWAY SAFETY PROGRAMME
Working together to resolve a complex problem



ATFM Global Symposium

(Q4, Singapore)

ATFM: Together, bringing every destination closer

- **Articulating a worldwide perspective to support regional implementation**
 - Drawing on worldwide expertise to advance regional implementation
 - Organized in collaboration with CANSO, Eurocontrol, the FAA, and IATA with the support of Singapore CAAS.
 - 1st ICAO Conference builds on series of ATFM global events previously organized every two years
 - Focus on :
 - Long range solutions and measures; international cooperation
 - Collaborate to managing flows from the airport to cruising altitudes and beyond.
 - **Look ahead: and innovation**
 - A look into the immediate future: advanced flow management:
 - Broadening the scope: innovative flow management.



GANIS/SANIS – Global Planning for the 40th assembly

Sustainability and enhancement of safety and air navigation system performance

- **Two back-to-back symposiums from 11 – 15 December 2017 in Montréal, Canada**
 - 2nd **Global Air Navigation Industry Symposium (GANIS)** to discuss issues and chart next steps to achieve a seamless global aviation system
 - 1st **Safety and Air Navigation Implementation Symposium (SANIS)** to offer a performance-based implementation methodology including the first **Global RASG/PIRG Forum**
- **Includes an Industry exhibition of current and emerging technologies**
 - Showcase solutions which will provide a snapshot of the global air navigation industry
 - Provide insight on how all stakeholders can work together to address technical, operational, regulatory and economic challenges
- **A crucial networking and knowledge-sharing opportunity**
 - Presentations from ICAO, international and regional organizations, standards-making organizations and leading industry stakeholders
- **Will lay the foundation for the 13th AN-Conference in 2018**

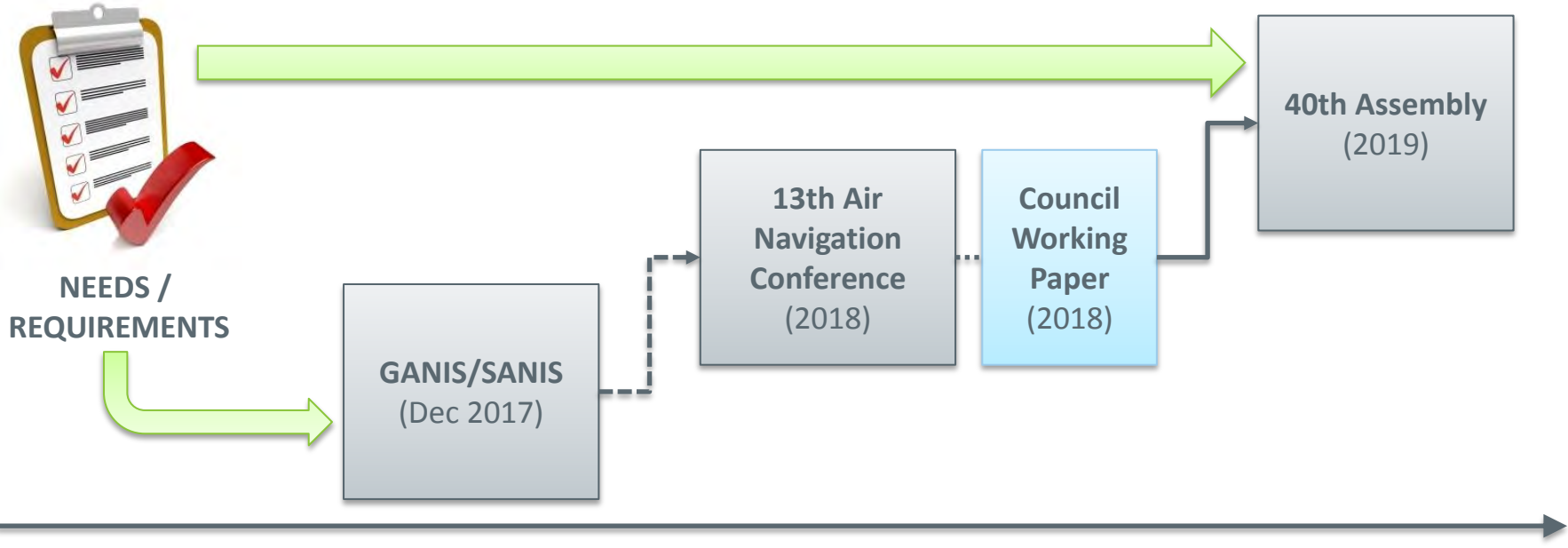


Proposed 13th Air Navigation Conference (AN-Conf/13) (October 2018)

State letter ST 14/1-17/54 of 28 April 2017 invites views of States and Organizations **by 28 July 2017**

Attachments:

- A — Details of the proposed conference
- B — Tentative list of subjects for inclusion in the Thirteenth Air Navigation Conference (2018) agenda
- C — Background information on the origin and purpose of the subjects
- D — Questionnaire on subjects for discussion by the Thirteenth Air Navigation Conference (2018)



GANIS/SANIS will facilitate the planning of technical work for AN-Conf/13, and also the budget discussions leading up to A40



THANK YOU!